

S	Q	A	V	A	T	K	C	Q	A	A	T	E	E	E	R	V	A	A	146	
AGC	CAG	GCC	GTG	GCC	ACC	AAG	TGC	CAA	GCA	GCC	ACC	ACT	GAG	GAA	GAG	CGA	GTG	GCT	GCA	438
V	T	L	R	K	A	E	A	M	A	F	L	Q	E	Q	P	F	K	D	F	166
GTG	ACG	CTG	CGC	AAG	GCT	GAG	GCC	ATG	GCT	TTC	TTG	CAA	GAG	CAG	CCC	TTT	AAG	GAT	TTC	498
V	T	S	A	F	Y	D	K	F	L	Q	W	K	L	F	E	M	Q	P	V	186
GTG	ACC	AGC	GCC	TTC	TAC	GAC	AAG	TTT	CTG	CAG	TGG	AAA	CTC	TTC	GAG	ATG	CAA	CCA	GTG	558
S	D	K	Y	F	T	E	F	R	V	L	G	K	G	G	F	G	E	V	C	206
TCA	GAC	AAG	TAC	TTC	ACT	GAG	TTC	AGA	GTG	CTG	GGG	AAA	GGT	GGT	TTT	GGG	GAG	GTA	TGT	618
A	V	Q	V	K	N	T	G	K	M	Y	A	C	K	K	L	D	K	K	R	226
GCC	GTG	CAG	GTG	AAA	AAC	ACT	GGG	AAG	ATG	TAT	GCC	TGT	AAG	AAA	CTG	GAC	AAG	AAG	CGG	678
L	K	K	K	G	G	E	K	M	A	L	L	E	K	E	I	L	E	K	V	246
CTG	AAG	AAG	AAA	GGT	GGC	GAG	AAG	ATG	GCT	CTC	TTG	GAA	AAG	GAA	ATC	TTG	GAG	AAG	GTC	738
S	S	P	F	I	V	S	L	A	Y	A	F	E	S	K	T	H	L	C	L	266
AGC	AGC	CCT	TTC	ATT	GTC	TCT	CTG	GCC	TAT	GCC	TTT	GAG	AGC	AAG	ACC	CAT	CTC	TGC	CTT	798
V	M	S	L	M	N	G	G	D	L	K	F	H	I	Y	N	V	G	T	R	286
GTC	ATG	AGC	CTG	ATG	AAT	GGG	GGA	GAC	CTC	AAG	TTC	CAC	ATC	TAC	AAC	GTG	GGC	ACG	CGT	858

Fig. 1B

G	L	D	M	S	R	V	I	F	Y	S	A	Q	I	A	C	G	M	L	H	306
GGC	CTG	GAC	ATG	AGC	CGG	GTG	ATC	TTT	TAC	TCG	GCC	CAG	ATA	GCC	TGT	GGG	ATG	CTG	CAC	918
L	H	E	L	G	I	V	Y	R	D	M	K	P	E	N	V	L	L	D	D	326
CTC	CAT	GAA	CTC	GGC	ATC	GTC	TAT	CGG	GAC	ATG	AAG	CCT	GAG	AAT	GTG	CTT	CTG	GAT	GAC	978
L	G	N	C	R	L	S	D	L	G	L	A	V	E	M	K	G	G	K	P	346
CTC	GGC	AAC	TGC	AGG	TTA	TCT	GAC	CTG	GGG	CTG	GCC	GTG	GAG	ATG	AAG	GGT	GGC	AAG	CCC	1038
I	T	Q	R	A	G	T	N	G	Y	M	A	P	E	I	L	M	E	K	V	366
ATC	ACC	CAG	AGG	GCT	GGA	ACC	AAT	GGT	TAC	ATG	GCT	CCT	GAG	ATC	CTA	ATG	GAA	AAG	GTA	1098
S	Y	S	Y	P	V	D	W	F	A	M	G	C	S	I	Y	E	M	V	A	386
AGT	TAT	TCC	TAT	CCT	GTG	GAC	TGG	TTT	GCC	ATG	GGA	TGC	AGC	ATT	TAT	GAA	ATG	GTT	GCT	1158
G	R	T	P	F	K	D	Y	K	E	K	V	S	K	E	D	L	K	Q	R	406
GGA	CGA	ACA	CCA	TTC	AAA	GAT	TAC	AAG	GAA	AAG	GTC	ACT	AAA	GAG	GAT	CTG	AAG	CAA	AGA	1218
T	L	Q	D	E	V	K	F	Q	H	D	N	F	T	E	E	A	K	D	I	426
ACT	CTG	CAA	GAC	GAG	GTC	AAA	TTC	CAG	CAT	GAT	AAC	TTC	ACA	GAG	GAA	GCA	AAA	GAT	ATT	1278
C	R	L	F	L	A	K	K	P	E	Q	R	L	G	S	R	E	K	S	D	446
TGC	AGG	CTC	TTT	TTG	GCT	AAG	AAA	CCA	GAG	CAA	CGC	TTA	GGA	AGC	AGA	GAA	AAG	TCT	GAT	1338

Fig. 1C

D	P	R	K	H	H	F	F	K	T	I	N	F	P	R	L	E	A	G	L	466										
GAT	CCC	AGG	AAA	CAT	CAT	TTC	TTT	AAA	ACG	ATC	AAC	TTT	CCT	CGC	CTG	GAA	GCT	GGC	CTA	1398										
I	E	P	P	F	V	P	P	D	P	S	V	V	Y	A	K	D	I	A	E	I	486									
ATT	GAA	CCC	CCA	TTT	GTG	CCA	GAC	CCT	TCA	GTG	GTT	TAT	GCC	AAA	GAC	ATC	GCT	GAA	ATT	1458										
D	D	F	S	E	V	R	G	V	E	F	D	D	K	D	K	Q	F	F	K	506										
GAT	GAT	TTC	TCT	GAG	GTT	CGG	GGG	GTG	GAA	TTT	GAT	GAC	AAA	GAT	AAG	CAG	TTC	TTC	AAA	1518										
N	F	A	T	G	A	V	P	I	A	W	Q	E	E	I	I	E	T	G	L	526										
AAC	TTT	CGG	ACA	GGT	GCT	GTT	CCT	ATA	GCA	TGG	CAG	GAA	GAA	ATT	ATA	GAA	ACG	GGA	CTG	1578										
F	E	E	L	N	D	P	N	R	P	T	G	C	E	E	G	N	S	S	K	546										
TTT	GAG	GAA	CTG	AAT	GAC	CCC	AAC	AGA	CCT	ACG	GGT	TGT	GAG	GAG	GGT	AAT	TCA	TCC	AAG	1638										
S	G	V	C	L	L	L	*													553										
TCT	GGC	GTG	TGT	TTG	TTA	TTG	TAA													1662										
ATT	GCT	CCT	TTT	ACC	GAG	GGC	AGC	GAG	GCT	CGG	CTG	GAC	ATA	TAT	CCT	CGA	ATG	TTCC	CAC	CGT	GAA	ATC	TGT	GGA						
AT	GAG	GGG	TAA	TCA	GTT	TAG	GAG	GGC	ATC	ATC	AC	CA	CA	CA	CA	CA	CA	AT	TCAA	AAG	CAG	CA	AG	CT	CAC	TACT	AG	AAC	ACAT	
TTT	AT	TTT	CT	TTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	CTT	
TTA	TTT	TTG	A	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG
TTA	TTT	TTG	A	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG	T	AG

Fig. 1D

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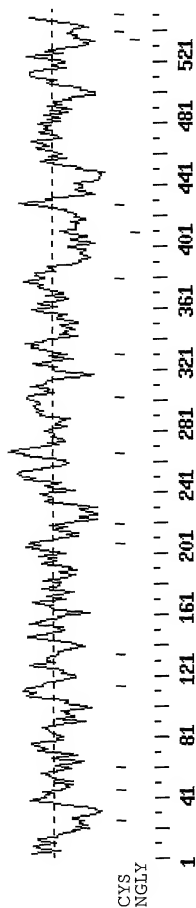


Fig. 2

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69087	<u>M</u> <u>V</u> <u>D</u> <u>M</u> <u>G</u> <u>A</u> <u>L</u> <u>D</u> <u>N</u> <u>L</u> <u>I</u> <u>A</u> <u>N</u> <u>T</u> <u>A</u>	<u>Y</u> <u>L</u> <u>O</u> <u>A</u> <u>R</u> <u>K</u> <u>P</u> <u>S</u> <u>D</u> <u>C</u> <u>S</u> <u>K</u> <u>E</u> <u>L</u>	<u>Q</u> <u>R</u> <u>R</u> <u>R</u> <u>S</u> <u>L</u> <u>A</u> <u>L</u> <u>P</u> <u>G</u> <u>L</u> <u>O</u> <u>G</u>	<u>A</u> <u>E</u> <u>L</u> <u>R</u> <u>O</u> <u>K</u> <u>L</u> <u>S</u> <u>L</u> <u>N</u> <u>F</u> <u>H</u> <u>S</u> <u>L</u> <u>C</u>
SGK064	MVDMGALDNLIA	YLOARKPSDCSKEL	QRRRSIALPLGLOGC	AELRQKLSLNFHSLC
ST GRK7	M-DMGGLDNLIA	YLOAR-KTDSREL	QRRRSIALPLGLOGC	AELRQKLSLNFHSLC
OL GRK7	MCDMGGLDNLVANTA	YLKAQ---GGDDKEM	QRRRSIALPLGLOGC	AELRQKLSLNFHSLC
CC GRK7	MCDMGGLDNLVANTA	YLKAQ---GGDDKEM	QRRRSIALPLGLOGC	AELRQKLSLNFHSLC
69087	<u>E</u> <u>O</u> <u>O</u> <u>P</u> <u>I</u> <u>G</u> <u>R</u> <u>R</u> <u>L</u> <u>F</u> <u>R</u> <u>D</u> <u>F</u> <u>L</u> <u>A</u>	<u>T</u> --- <u>V</u> <u>P</u> <u>T</u> <u>R</u> <u>K</u> <u>A</u> <u>A</u> <u>T</u> <u>F</u> <u>L</u> <u>E</u> <u>D</u>	<u>V</u> <u>Q</u> <u>N</u> <u>W</u> <u>E</u> <u>L</u> <u>A</u> <u>E</u> <u>E</u> <u>G</u> <u>P</u> <u>T</u> <u>K</u> <u>D</u> <u>S</u>	<u>A</u> <u>L</u> <u>O</u> <u>Q</u> <u>L</u> <u>V</u> <u>A</u> <u>T</u> <u>C</u> <u>A</u> <u>S</u> <u>A</u> <u>P</u> <u>A</u> <u>P</u>
SGK064	EOOPIGRRLFRDFLA	T-VPTPRKAATFLED	VQNWELAEEGPTKDS	ALQQLVATCASAPAP
ST GRK7	EOOPIGRRLFRDFLA	T-VPTPRKAATFLED	VQNWELAEEGPTKDS	ALQQLVATCASAPAP
OL GRK7	EQOPIGRRLFRDFLA	T-VPKYSQAVAFLED	VQNWELAEEGPAKTS	TLOQLAATCARDGPG
CC GRK7	ERQOPIGRRLFRDFLA	N-TPEFKLAEEFLDE	LYDWDLAEGAAKDKA	RQNIINKYCKPDSKT
69087	<u>G</u> <u>N</u> <u>P</u> <u>O</u> <u>P</u> <u>F</u> <u>L</u> <u>S</u> <u>O</u> <u>A</u> <u>V</u> <u>A</u> <u>T</u> <u>K</u>	<u>Q</u> <u>A</u> <u>A</u> <u>T</u> <u>T</u> <u>E</u> <u>E</u> <u>R</u> <u>V</u> <u>A</u> <u>A</u> <u>V</u> <u>T</u> <u>L</u>	<u>R</u> <u>K</u> <u>A</u> <u>E</u> <u>A</u> <u>M</u> <u>A</u> <u>F</u> <u>L</u> <u>O</u> <u>E</u> <u>O</u> <u>P</u> <u>F</u> <u>K</u>	<u>D</u> <u>E</u> <u>V</u> <u>T</u> <u>S</u> <u>A</u> <u>F</u> <u>Y</u> <u>D</u> <u>K</u> <u>F</u> <u>L</u> <u>O</u> <u>W</u> <u>K</u>
SGK064	GNPOPFLSOAVATKC	QAATTEERVAAVTL	RKAEMAFLOEQOPFK	DEVTSAFYDKFLOWK
ST GRK7	---QSFLSQDLATKC	RAASTDEERKTLVEQ	AKAEMAFLOEQOPFK	DEVTSAFYDKFLOWK
OL GRK7	S---LTFLTGDVATKC	KAVTDKDFEEVNG-Q	VKEATKEFLKGKPF	DYOTSEFFKFLOWK
CC GRK7	F---LTFLSGEPAEKC	KSVTDATFEEVMKNK	VQDGVREFLKGKPF	EYQGSQYFDKFLOWK
69087	<u>L</u> <u>F</u> <u>E</u> <u>M</u> <u>O</u> <u>P</u> <u>V</u> <u>S</u> <u>D</u> <u>K</u> <u>Y</u> <u>F</u> <u>T</u> <u>E</u> <u>F</u>	<u>R</u> <u>V</u> <u>L</u> <u>K</u> <u>G</u> <u>G</u> <u>G</u> <u>F</u> <u>E</u> <u>V</u> <u>C</u> <u>A</u> <u>V</u> <u>Q</u>	<u>V</u> <u>R</u> <u>N</u> <u>T</u> <u>G</u> <u>M</u> <u>Y</u> <u>A</u> <u>C</u> <u>K</u> <u>K</u> <u>L</u> <u>D</u> <u>K</u>	<u>K</u> <u>R</u> <u>L</u> <u>K</u> <u>K</u> <u>G</u> <u>G</u> <u>E</u> <u>K</u> <u>W</u> <u>A</u> <u>L</u> <u>L</u> <u>E</u>
SGK064	LFEMOPVSDKYFTEF	RVLKGGGFGEVCAVQ	VKNTGMYACKKLDK	KRLKKKGGERKALLE
ST GRK7	LFEMOPVSDKYFTEF	RVLKGGGFGEVCAVQ	VKNTGMYACKKLDK	KRLKKKGGERKALLE
OL GRK7	EYEKOPITEKYFTEF	RTLKGGGFGEVCAVQ	VKNTGMYACKKLDK	KRLKKKGGERKALLE
CC GRK7	EYEKOPISDKYFTEF	RTLKGGGFGEVCAVQ	VKNTGMYACKKLDK	KRLKKKGGERKALLE

Fig. 3A

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69087	KEILEKVSPPFIVSL	AYAFESKTHLCLVMS	LMNGGDLKFHIYNVG	T-----RGLDMSRV
SGK064	KEILEKVSPPFIVSL	AYAFESKTHLCLVMS	LMNGGDLKFHIYNVG	T-----RGLDMSRV
ST GRK7	KEILEKVSPPFIVSL	AYAFESKTHLCLVMS	LMNGGDLKFHIYNVG	T-----RGLAMSRV
OL GRK7	KEILEKVSPPFIVSL	AYAYDTKTHLCLVMS	LMNGGDLKYHIYNIG	-----EKGIEMERI
CC GRK7	KEILEKVSNSLFLVNL	AYAYDTKTHLCLVMT	LMNGGDLKYHIYNIG	YDGKGVDDKGIEMKRI
69087	IFYSAQIACGMLHLH	ELGIVYRDMKPNVL	LDLGNCRLSDLGLA	VEMKGGCPITQKAGT
SGK064	IFYSAQIACGMLHLH	ELGIVYRDMKPNVL	LDLGNCRLSDLGLA	VEMKGGKRPITQKAGT
ST GRK7	IFYTAQMTGCVLHLH	GLGIVYRDLKPNVL	LDLGNCRLSDLGLA	VEVQDDKRPITQKAGT
OL GRK7	IYYTAQITTCMLQIH	NMDIVYRDMKPNVL	LDSQGQCRLSDLGLA	VEIPVGKTTQKAGT
CC GRK7	IHYTAQITTTGILHLH	DMDIIVYRDMKPNVL	LDSQGQCRLSDLGLA	IEIAPGKTVTQKAGT
69087	NGYMAPEILMEKVS	SYPDVDFWFMGCCSYE	MVAGRTPFKD----	YK EKVSKEDLKQRTLOD
SGK064	NGYMAPEILMEKVS	SYPDVDFWFMGCCSYE	MVAGRTPFKD----	YK EKVSKEDLKQRTLOD
ST GRK7	NGYMAPEILMDKASY	SYPDVDFWFMGCCSYE	MVAGRTPFKD----	FK EKVSKEDLKQRTMMD
OL GRK7	GAYMAPEILTEP-Y	RTSDVDFWFMGCCSYE	MVAGYTPFKGPEAKK	EKVEKEEVQRRITINE
CC GRK7	GAYMAPEILSKTP-Y	RTSDVDFWFMGCCSYE	MVAGYTPFKGPESKK	EKVEKEEVQRRITINE
69087	EVKFQHDNFTTEAKD	ICRUFLAKKPEQRLG	SREKSDDPKHHFFK	TINFPRLEAGLIEPP
SGK064	EVKFQHDNFTTEAKD	ICRUFLAKKPEQRLR	SREKSDDPKHHFFK	TINFPRLEAGLIEPP
ST GRK7	EVAFHNFNTEETKD	ICRUFLAKKPEQRLG	SREKADDPKHHFFQ	TWNFPRLAAGLVEPP
OL GRK7	EPKFEHKNFAPTID	I IQOFLKKKIDERLG	KRG-----DPRKHEWFK	SINFARLEAGLIDPP
CC GRK7	EPKWEHKKCFDAPTKD	VIQOFLKKKIDERLG	MNNMDEDPKHEWFK	SINFPRLEAGLIDPP

Fig. 3B

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69087 FVPDPSVVYAKDIAE IDDFSEVRGVFDDK DKQFFKNFATGAVPI AWQEEIETGLFEEL
 SGK064 FVPDPSVVYAKDIAE IDDFSEVRGVFDDK DKQFFKNFATGAVPI AWQEEIETGLFEEL
 ST GRK7 FVPDPSVVYAKDVDE IDDFSEVRGVFDDK DKQFFKFSTGAVPV AWQEEIETGLFEEL
 OL GRK7 WVPKENVVYAKDTGD IAEFSEIKGIEFDAK DEKFFKFSTGAVSI AWQEMIDTGLFDEL
 CC GRK7 WVPKENVVYAKDTGD IAEFSEIKGIEFDAK DDKFFKFSTGAVPI QWQEMETGLFDEL

69087 NDPNRPTGCEEGNSS K-SGVCLLL
 SGK064 NDPNRPTGCEEGNSS K-SGVCLLL
 ST GRK7 NDPNRPSGDGKGDSS K-SGVCLLL
 OL GRK7 NDPNRKESGGLDDE KKSGTCTLL
 CC GRK7 NDPNRKEGAGGDDE KKSGTCTLL

Fig. 3C

GGGGCGAAGAGGGGCTGAACCCGTCCGTCGCCGGGGGTGGAGCCGCCACGGGGAGGGCGTCGGCGGGGTGGAGA
 CTGCGCTCCCTCCAGCCCTGGGGAGAACTTTCTGCCCCCCTCTCCCTCCCCCGAGTCGGACTCCCTCCCCAG
 CCGGCCAGTCTCCCGGAGGAGAAGGGCGCGGAGACAGCCCGGGGGGGCCCTACCTTCCCCAGGGCAGGCATC

M S A A Q V S S S R R Q S C Y L C D L P 20
 ATG TCG GCG GCG CAG GTG TCC TCG TCC CGG AGA CAA TCT TGC TAC CTG TGC GAC CTG CCC 60

R M P W A M I W D F S E P V C R G C V N 40
 CGC ATG CCC TGG GCC ATG ATC TGG GAC TTC TCG GAA CCC GTA TGC CGC GGT TGC GTC AAC 120

Y E G A D R I E F V I E T A R Q L K R A 60
 TAC GAG GGC GCT GAT CGC ATC GAA TTC GTG ATC GAG ACA GCG CGC CAG CTG AAG CGG GCG 180

H G C F P E G R S P P G A A A S A A A K 80
 CAC GGC TGC TTC CCG GAG GGT CGC TCC CCA CCC GGC GCG GCG TCG GCC GGC GGC AAG 240

P P P L S A K D I L L Q Q Q Q Q L G H G 100
 CCG CCG CCG CTC TCC GCC AAG GAC ATC CTT TTG CAG CAG CAG CAG CAG CTT GGC CAC GGC 300

G P E A A P R A P Q A L E R Y P L A A A 120
 GGC CCC GAG GCG GCC CCG CGC CCG CAG GCC TTG GAG CGC TAC CCG TTG GCG GCC GCG 360

A E R P P R L G S D F G S S R P A A S L 140
 GCC GAG AGG CCC CCG CGC CTC GGC TCT GAC TTC GGC AGC AGC CGC CCG GCA GCG AGC CTG 420

Fig. 4A

Fig. 4B

K F K K E P A L T A G R L L G F E A N G	320
AAG TTT AAG AAG GAG CCG CTG ACT GCA GGC AGG TTG TTG GGT TTC GAG GCC AAC GGG	960
A N G S K A V A R T A R K R K P S P E P	340
GCC AAC GGG TCT AAA GCA GTT GCA AGA ACA GCA AGG AAA AGG AAG CCC TCT CCA GAA CCA	1020
E G E V G P P K I N G E A Q P W L S T S	360
GAA GGT GAA GTC GGG CCC CCT AAG ATC AAC GGA GAG GCC CAG CCG TGG CTG TCC ACA TCC	1080
T E G L K I P M T P T S S F V S P P P	380
ACA GAG GGG CTC AAG ATC CCC ATG ACT CCT ACA TCC TCT TTT GTG TCT CCG CCA CCA	1140
T A S P H S N R T T P P E A A Q N G Q S	400
ACT GCC TCA CCT CAT TCC AAC CCG ACC ACA CCG CCT GAA GCG GCC CAG AAT GGC CAG TCC	1200
P M A A L I L V A D N A G G S H A S K D	420
CCC ATG GCA GCC CTG ATC TTA GTA GCA GAC AAT GCA GGG GGC AGT CAT GCC TCA AAA GAT	1260
A N Q V H S T T R R N S N S P P S S	440
GCC AAC CAG GTT CAC TCC ACT ACC AGG AGG AAT AGC AAC AGT CCG CCC TCT CCG TCC	1320
M N Q R R L G P R E V G Q G A G N T G	460
ATG AAC CAA AGA AGG CTG GGC CCC AGA GAG GTG GGG GGC CAG GGA GCA GGC AAC ACA	1380

Fig. 4C

Fig. 4D

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TCGAACGGGCATGTTGTCAAGTGGGCATGCCACTGGAAATACCAACCAAGTTTACCTTGAAACAATTGCTCTCAGAGGAGT
AAGAAAGTGGATTGTTGAACTCTTATTTGCTCTAAAGTTCAAGTTCTTGAGATCATGATCAGGAGTGTCTCGGGAA
ATTTCAGGATGTGTGGTCTTTTGGGTTTGTGTTTTTTTTTTTAAAGACAAAGTTGACCGCTGTTCACTGTCCAC
CATCTCAGTTGTAAGATTACAAATGCTGATGCTGATGTTGGTTTACATAGAATACAAATCCAGTTGATGAAGCGGTTATTAA
TGGAATGGTGGTGTACAAAGATGGCACTGCCACTTTGAGCAGAGCCCACTCTGCAGCGCCACTTCATCTTTTAAAC
TACCTCAGAGTCTGTTGTGTGCTGTGCTCTATTTTGAAGAGGTTGCAGAGAGATTACAGTCCAGGTGAACATT
GGAGATGTGGGAATGGTTTGTCTTGTGTTTGTATCATTTTACCTGTAGTGGCTATTGCTGTTGATCACTATCA
CTATACCTCTGTTCTCAGTAGTGCTGAATACAGTATGGTACATGA

Fig. 4E



Fig. 5

15821	MSAAQVSSRRQSCY	LCDLPRMPWAMIWDF	SEPVCRGCVNYEGAD	RIEFVIETARQLKRA
C14orf4	MSAAQVSSRRQSCY	LCDLPRMPWAMIWDF	SEPVCRGCVNYEGAD	RIEFVIETARQLKRA
KIAA1865	-----	-----	-----	-----
15821	HG-----	CFPEGRSPGAAASA	AAKPPPLSAKDILLQ	QQQQLGHGGPEAAPR
C14orf4	HGCFQDGRSPGPPPP	VGVKTVALSAKEAAA	AAAAAAAAAAAAAQ	QQQQQQQQQQQQQQ
KIAA1865	-----SH	RIRDSAPAEAGAR	LLPGRPLPRAAAAQ	QQQQQQQQQQQQQQ
15821	APQALERYPLAAAAE	RPRLGSDFGSSRP-	-----AAS	LAQPPTPQPPP-----
C14orf4	QQQQQQQLNHVDGSS	KPAVLAAPSGLERYG	LSAAAAAAAAAAAAAV	EQRSRFEYPPPPPVSL
KIAA1865	QQQQQQQLNHVDGSS	KPAVLAAPSGLERYG	LSAAAAAAAAAAAAAV	EQRSRFEYPPPPPVSL
15821	-----VNGILV	PNGFSK---LEEPPE	LNROSPNP-----	-----
C14orf4	GSSSHTARLPNGLGG	PNGFPKPTPEEGPPE	LNROSPNSSAAAAV	ASRRGTHGGLVTGLP
KIAA1865	GSSSHTARLPNGLGG	PNGFPKPTPEEGPPE	LNROSPNSSAAAAV	ASRRGTHGGLVTGLP
15821	---RRG---HAVPPT	LVPLMNGSATPAAAS	LGSAQPTDLG-----	-----AHKRP--AS
C14orf4	NPGGGGGQLTVPPN	LLPQTLLNGPASAAV	LP PPPPHALGSRGPP	TPAPPGAPGGPACLG
KIAA1865	NPGGGGGQLTVPPN	LLPQTLLNGPASAAV	LP PPPPHALGSRGPP	TPAPPGAPGGPACLG

FIG 6A

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15821	-----VSSS	AAVEHEQREAAAKEK	QPPPPAHRGPADSL	TAAGAAELSAEGAGK
C14orf4	GTPGVSAATSSSSASS	TSSSVAEVGVGAGGK	RPGSVSTDDQERELK	EKQRNAEALAEISES
K1AA1865	GTPGVSAATSSSSASS	TSSSVAEVGVGAGGK	RPGSVSTDDQERELK	EKQRNAEALAEISES
15821	SRGSGEQDWNRPKT	VRTLLALH-----	-----	-----
C14orf4	LRN-RAEEWASKPKM	VRTLLTLTLAGCTPYE	VRFKKDHSLLLGRVFA	FDAVSKPGMDYELKL
K1AA1865	LRN-RAEEWASKPKM	VRTLLTLTLAGCTPYE	VRFKKDHSLLLGRVFA	FDAVSKPGMDYELKL
15821	-----	-----	-----	-----QHGHSGP
C14orf4	FIEYPTGSGNVYSSA	SGVAKQMYQDCMKDF	GRGLSSGFKYLEYEK	KHGGDWRLLDLLP
K1AA1865	FIEYPTGSGNVYSSA	SGVAKQMYQDCMKDF	GRGLSSGFKYLEYEK	KHGGDWRLLDLLP
15821	FESKFKKE-----	-----P-----	-----ALTAGRL	GFEANGANGSKAVAR
C14orf4	EAVRFFKEGVPGADM	LPQPYLDASCFMLPT	ALVSLSRAPSAPEGT	GALPPAAPSGRGAAA
K1AA1865	EAVRFFKEGVPGADM	LPQPYLDASCFMLPT	ALVSLSRAPSAPEGT	GALPPAAPSGRGAAA
15821	TAKRKPSPPEGEV	GPKINGEAP---W	LSTSTEGIKIPMTPT	SSFVS-----PP
C14orf4	SLRKRKASPEPPDSA	EGALKLGEEOORQQW	MANQSEALKLTWSAG	GFAAPGHAAGGPPPP
K1AA1865	SLRKRKASPEPPDSA	EGALKLGEEOORQQW	MANQSEALKLTWSAG	GFAAPGHAAGGPPPP

FIG. 6B

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15821	PPTASPHSNRTTPE	AAQ-NGQSPMAALIL	VADNAGGSHASKDAN	QVHSTR--R-NSNS
C14orf4	PPPLGPHSNRTTPE	SAPQNGPSPMAALMS	VADTLGTAHSPKDG	SVHSTTASARRNSSS
K1A1865	PPPLGPHSNRTTPE	SAPQNGPSPMAALMS	VADTLGTAHSPKDG	SVHSTTASARRNSSS
15821	PPSPSSMN-QRR LGP	R-----EVGGQGAG	NTGGLPVPHPASLPD	SSLATSAPLCCTLCH
C14orf4	PVSPASVPGQRR LAS	RNGDLNLQVAPPPPS	AHPGMDQVHPQNIPD	SPMANSGLCCTICH
K1A1865	PVSPASVPGQRR LAS	RNGDLNLQVAPPPPS	AHPGMDQVHPQNIPD	SPMANSGLCCTICH
15821	ERLEDTHFVQCPSPV	SHKFCFP CSRQSIKQ	QGASGEVYCPSGEKC	PLVGSNVPWAFMQGE
C14orf4	ERLEDTHFVQCPSPV	SHKFCFP CSRQSIKQ	QGATGEVYCPSGEKC	PLVGSNVPWAFMQGE
K1A1865	ERLEDTHFVQCPSPV	SHKFCFP CSRQSIKQ	QGATGEVYCPSGEKC	PLVGSNVPWAFMQGE
15821	IATILAGDVKKKER	DS		
C14orf4	IATILAGDVKKKER	DP		
K1A1865	IATILAGDVKKKER	DP		

FIG. 6C

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15821	GFEANGANGSKAVAR	TARKRKPSPEPEGEV	GPPKINGEAQP----	LSTSTEGIKIPMTPT
C14orf4	GALPPAAPSGRGA	SLRKRKASPEPPDSA	EGALKLGEQQRQOW	MANQSEALKLWTSAG
KIAA1865	GALPPAAPSGRGA	SLRKRKASPEPPDSA	EGALKLGEQQRQOW	MANQSEALKLWTSAG
736	-----VAR	TARKRKPSPEPEGEV	GPPKINGEAQP----	XSTSTEGXKIPMTPT
HTRM	-----	-----	-----	-----MTPT
dn740_3	-----	-----	-----	-----
Unnamed	-----	-----	-----	-----MSAG
15821	SSEVS-----PP	PPTASPHSNRTTPE	AAQ-NGQSPMAALIL	VADNAGGSHASKDAN
C14orf4	GFAAPGHAAGGPPPP	PPPLGPHSNRTTPE	SAPONGPSPMAALMS	VADTLGTAHSPKDG
KIAA1865	GFAAPGHAAGGPPPP	PPPLGPHSNRTTPE	SAPONGPSPMAALMS	VADTLGTAHSPKDG
736	SSEVS-----PP	PPTASPHSNRTTPE	AAQ-NGQSPMAALIL	VADNAGGSHASKDAN
HTRM	SSEVS-----PP	PPTASPHSNRTTPE	AAQ-NGQSPMAALIL	VADNAGGSHASKDAN
dn740_3	SSEVS-----PP	PPTASPHSNRTTPE	AAQ-NGQSPMAALIL	VADNAGGSHASKDAN
Unnamed	GFAAPGHAAGGPPPP	PPPLGPHSNRTTPE	SAPONGPSPMAALMS	VADTLGTAHSPKDG
15821	QVHSTTR--R-NSNS	PPSPSSMN-QRRLLP	R-----EVGGQGAG	NTGGLEPVHPASILPD
C14orf4	SVHSTTTASARRNSS	PVSPASVPQORRLAS	RNGDLNLQVAPPPPS	AHPGMDQVHPQNI
KIAA1865	SVHSTTTASARRNSS	PVSPASVPQORRLAS	RNGDLNLQVAPPPPS	AHPGMDQVHPQNI
736	QVHSTTR--NSNS	PPSPSSMN-QRRLLP	R-----EVGGQGAG	NTGGLEPVHPASILPD
HTRM	QVHSTTR--NSNS	PPSPSSMN-QRRLLP	R-----EVGGQGAG	NTGGLEPVHPASILPD
dn740_3	QVHSTTR--NSNS	PPSPSSMN-QRRLLP	R-----EVGGQGAG	NTGGLEPVHPASILPD
Unnamed	SVHSTTTASARRNSS	PVSPASVPQORRLAS	RNGDLNLQVAPPPPS	AHPGMDQVHPQNI

FIG. 7A

15821	SSLATSAPLCCTICH	ERLEDTHFVQCPSVP	SHKFCFPCSRQSIKQ	QGASGEVYCPSGEKC
C14orf4	SPMANGPLCCTICH	ERLEDTHFVQCPSVP	SHKFCFPCSRRESIKA	QGATGEVYCPSGEKC
KIAA1865	SPMANGPLCCTICH	ERLEDTHFVQCPSVP	SHKFCFPCSRRESIKA	QGATGEVYCPSGEKC
736	FSIATSAPLCCTICH	ERLEDNHFVQC----	-----	-----
HTRM	SSLATSAPLCCTICH	ERLEDTHFVQCPSVP	SHKFCFPCSRQSIKQ	QGASGEVYCPSGEKC
dn740_3	SSLATSAPLCCTICH	ERLEDTHFVQCPSVP	SHKFCFPCSRQSIKQ	QGASGEVYCPSGEKC
Unnamed	SPMANGPLCCTICH	ERLEDTHFVQCPSVP	SHKFCFPCSRRESIKA	QGATGEVYCPSGEKC
15821	PLVGSNVPWAFMQGE	IATILAGDVKVKKER	DS	
C14orf4	PLVGSNVPWAFMQGE	IATILAGDVKVKKER	DP	
KIAA1865	PLVGSNVPWAFMQGE	IATILAGDVKVKKER	DP	
736	-----	-----	--	
HTRM	PLVGSNVPWAFMQGE	IATILAGDVKVKKER	DS	
dn740_3	PLVGSNVPWAFMQGE	IATILAGDVKVKKER	DS	
Unnamed	PLVGSNVPWAFMQGE	IATILAGDVKVKKER	DP	

FIG. 7B

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GTCGACACGCGTCCGGGAGACAGAAAGAGGTGGTGGCGATAGTGTCTCTTTCTCCAACACCTAGCCTGAGACT	18
TGGCGGGCGGCTGCTATCCTGAACTAGCTGGTAAGTGTGTGCCCGACACCGGTAGAGAGACCTCGGACACGCCC	54
M T A S A S S F S S S Q G V Q Q P S	18
CCTTG ATG ACA GCA TCC GCG TCC TCC TTT TCA TCA TCT CAG GGT GTC CAG CAG CCC TCC	54
I Y S F S Q I T R S L F L S N G V A A N	38
ATC TAC AGC TTC TCC CAA ATA ACC AGA AGC TTG TTT CTC AGC AAT GGT GTG GCC GCC AAC	114
D K L L S S N R I T A I V N A S V E V	58
GAC AAA CTC CTT CTG TCC AGC AAT CGC ATC ACC GCC ATT GTC AAT GCC TCG GTG GAA GTG	174
V N V F F E G I Q Y I K V P V T D A R D	78
GTC AAC GTA TTC TTC GAG GGC ATT CAG TAC ATA AAG GTG CCT GTT ACC GAT GCT CGT GAC	234
S R L Y D F F D P I A D L I H T I D M R	98
TCG CGT CTC TAC GAC TTT TTT GAC CCC ATT GCT GAT CTT ATC CAC ACC ATC GAT ATG AGG	294
Q G R T L L H C M A G V S R S A S L C L	118
CAG GGC CGT ACG CTG CTG CAC TGC ATG GCT GGA GTG AGC CGT TCC GCC TCA CTG TGC CTT	354
A Y L M K Y H S M S L L D A H T W T K S	138
GCG TAC CTC ATG AAA TAC CAC TCC ATG TCG CTG GAC GCC CAT ACA TGG ACC AAG TCG	414

Fig. 8A

R	R	P	I	I	R	P	N	N	G	F	W	E	Q	L	I	N	Y	E	F	158
CGC	CGC	CCC	ATC	ATC	CGG	CCC	AAC	AAC	GGC	TTT	TGG	GAA	CAG	CTC	ATC	AAT	TAC	GAA	TTC	474
K	L	F	N	N	N	T	V	R	M	I	N	S	P	V	G	N	I	P	D	178
AAG	CTG	TTT	AAT	AAC	AAC	ACC	GTG	CGC	ATG	ATC	AAC	TGC	CCG	GTA	GGT	AAC	ATC	CCT	GAC	534
I	Y	E	K	D	L	R	T	M	I	S	M	*								190
ATC	TAT	GAG	AAG	GAC	CTA	CGT	ACG	ATG	ATA	TCA	ATG	TAA								573
GCCATCCGGCCAGCCCTGACATCTGCCATCGATCTTCACCAAGACTGAACCTTGACACTGACATTTTGTAGTAAA																				
GAAACCGGATGGTGCCTGTGTTAAAGGCAAGAAAAAGGGAGGGGTTGGAGTTTGAACGTAGTAAGCCTTACCCTA																				
ATAGATTAAATTCAATGAAACATAAAACA																				

Fig. 8B

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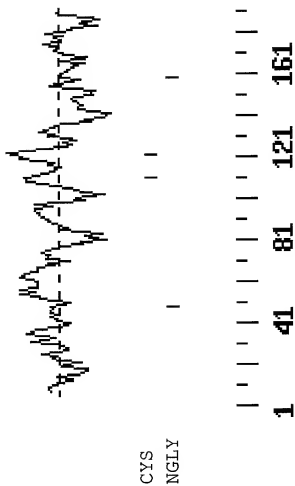


Fig. 9

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15814	1	MTASASSFSSQGVQQPSIYSFSQITRSLFSLNGVAANDKLLSSNRITAIYNASVEVN	60
DSP-8	1	MTASASSFSSQGVQQPSIYSFSQITRSLFSLNGVAANDKLLSSNRITAIYNASVEVN	60
15814	61	VFFEGIQYIKVPVTDARDSRLYDFFDPIADLIHTIDMRQGRILLHCMAGVSRASLCLAY	120
DSP-8	61	VFFEGIQYIKVPVTDARDSRLYDFFDPIADLIHTIDMRQGRILLHCMAGVSRASLCLAY	120
15814	121	LMKYHMSLLDAHTWTKSRPPIRPNNGFWEQLINYEFKLFNNNTVVRMINSVPVGNIPDIY	180
DSP-8	121	LMKYHMSLLDAHTWTKSRPPIRPNNGFWEQLINYEFKLFNNNTVVRMINSVPVGNIPDIY	180
15814	181	EKDLRTMISM	190
DSP-8	181	EKDLRTMISM	190

Fig. 10